

THE RELATIONSHIP OF ENTRANCE AGE AND ACADEMIC
ACHIEVEMENT IN THE PRAIRIE CITY, IOWA
ELEMENTARY SCHOOL DISTRICT

A Field Report
Presented to
The Graduate Division
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Master of Science in Education

by
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CHAPTER I

INTRODUCTION

I. PURPOSE OF THE STUDY

It was the purpose of this study to examine the test data which have been collected in grades three through six of the Prairie City School District, Prairie City, Iowa, in an attempt to determine the relationship, if any, of chronological entrance age and academic achievement; and to evaluate the advantages, if any, of the changes in legislation requiring that school entrance age be raised from five years of age on or before November fifteenth of a current school year to the more recent requirement of September fifteenth of a current school year.¹

II. BACKGROUND OF THE PROBLEM

The Code of Iowa states that:

On and after July 1, 1952, . . . no child shall be admitted to school work for the year immediately preceding the first grade unless he is five years of age on or before the fifteenth of November of the current school year.

On and after July 1, 1962, . . . no child shall be admitted to school work for the year immediately preceding the first grade unless he is five years of age on or before the fifteenth of October of the current

¹Code of Iowa, Vol. I, 1962, Chapter 282.3, pp. 914-915.

school year.

On and after July 1, 1963, . . . no child shall be admitted to school work for the year immediately preceding the first grade unless he is five years of age on or before the fifteenth of September of the current school year.¹

Does the most recent ruling which requires that the child be five years of age on or before the fifteenth of September make for more uniformity of academic achievement within a grade level than the previous ruling of the critical date of November fifteenth? Does the child at the upper level of the chronological age scale achieve academically at a higher level than the child at the lower level of the chronological age scale? Does the additional two months' maturity attained as a result of the ruling contribute enough in an overall grouping situation to justify the ruling? Should there be provision for testing for purposes of early entry to kindergarten in the case of the exceptionally bright child? Would parents of a child whose birthday is in late August or early September be wise to keep the child out of school for an additional year? These are some of the many inquiries received each year by administrators with regard to regulations governing entrance age for kindergarten or first grade.

Wright stated that:

School people write that parents are concerned because of restrictions which keep their children out

¹Ibid.

of school a year unless their birthdays precede a given date. . . . School officials are interested in developing a policy which will assure that children entering the first grade will be able to do the work of first grade, want to know what is the most generally accepted chronological age for entrance to first grade.

. . . Information is fairly complete on compulsory-school-attendance ages, but little is available on the ages at which children are permitted to enter school, the reason being that compulsive school attendance laws are state-wide, while regulations governing permissive school entrance ages are, in most states, made by local school boards.¹

That chronological age is an important factor in academic achievement is evident from the literature concerning entrance age requirements. In New York City the entrance age was lowered in 1946 allowing:

children who will reach the age of six before March 1, of a school year to be admitted to a first year class in the preceding September. Until recently, school regulations required that children be at least six years old before they could be admitted to a first year class, except that those who reach the age of six during the first three calendar months of a school term and who had the mental intelligence of a six-year old child could be admitted at the beginning of the term or during the first three months of a semester.²

One of the reasons given for this ruling was to ". . . facilitate and insure the earlier admission of a larger number of pupils to early childhood education."³

¹George S. Wright, "Permissive School Entrance Age," School Life, XXVIII (July, 1946), 20-25.

²G. E. Storm, "Age Reduced for Entering Grade I-A," Elementary School Journal, LVII (September, 1946), 7-8.

³Ibid.

Wright wrote that in 1946, Keokuk, Iowa; Portland, Maine; and Santa Fe, New Mexico were systems operating on the ruling that:

children who will not be five or six, for kindergarten or first grade respectively, approximately at the beginning of the term, may not be permitted to enter until the following school year.¹

Keokuk authorities, in justification of policy, said that they had made no exceptions to the rule since it became effective September, 1942. (Previously the critical date was January 1.) At the end of each year they had the kindergarten teachers, then finally the first and second grade teachers, submit written reports indicating the effect the delayed age had had in the school program. "In all cases . . . their reports strengthened their belief that the kindergarten age should be delayed."²

In these days in which education plays an increasingly important role and public education is reaching the lower age groups through our poverty programs, it is well to remember Clement Atlee's statement regarding Great Britain's desire to further democratize their schools, when one of their biggest problems was the shortage of manpower. He said, "We are straightened in our manpower. We must

¹George S. Wright, op. cit., pp. 24-25.

²Ibid.

make up in quality what we lack in quantity."¹

III. NEED FOR THE STUDY

An administrator must constantly be aware of the State legislation, be responsible for its enforcement, and have some knowledge of its effect upon his school system.

There is a need for research at a local level to evaluate the success of existing legislation and practices to justify to the many publics (parents, teachers, students, and others) the reasons for their being, and for purposes of analysis and improvement of curriculum.

IV. PROCEDURE

Selection of Subjects. The groups of children chosen for this study were the Prairie City, Iowa, fifth and sixth graders who entered kindergarten in September of 1960 and 1961, when Iowa's minimum entrance age law was still in effect requiring that a child be five years of age by November fifteenth; the fourth grade, who entered kindergarten in September of 1962 when the entrance age was five years by October fifteenth; and the third grade, who entered kindergarten in September of 1963 when the entrance age was

¹C. O. Houle, "Minimum School Age Attendance," Elementary School Journal, XLVII (September, 1946), 427.

five years by September fifteenth.¹ There were two sections of each grade, with an average of about twenty-one students in each. Each section was in a self-contained classroom, grouped heterogeneously.

The school system was located in a stable, rural community in which the majority of the parents were engaged in farming or some related business. The school was thirty miles from Des Moines, and a few of the parents commuted to city jobs. Families had gone to this same school for generations, and many were related. There was a fairly equal socio-economic level.

For purposes of this study all these factors combined to make this area one in which age was a predominant factor.

Description and Collection of Data. The Iowa Test of Basic Skills was selected because that was the test given to every group included in this study, and is the test most commonly used in Iowa schools as a measure of academic achievement. The test was administered in January of 1967. Test scores selected as being most representative of individual overall progress was the composite grade equivalent score.

Birth dates were taken from the cumulative folders, and certification was required upon entrance to kindergarten.

¹Code of Iowa, loc. cit.

Organization of Data. The grade equivalent score and month of birth, indicating chronological age, of each child was plotted on a graph for each grade level. Both sections of each grade were plotted in one unit. Using class median scores of the combined grade level tends to allow for differences in class advancement and teaching practices in the two sections of each grade.

To permit a comparison of achievement on the basis of age the children were divided into groups of the oldest twenty-five per cent, the middle fifty per cent, and the youngest twenty-five per cent. Comparisons were made between the percentage of students ranking above and below the class mean and actual grade placement.

Exceptions to the Survey. The percentage of students retained or absent on the day of the test was so small as to be insignificant to this survey.

CHAPTER II

REVIEW OF THE LITERATURE

Educators have widely varied opinions on requirements for school entrance. Some believe that chronological age alone should be the criterion, others believe that mental age is more important, while many believe there could well be a middle course whereby chronological age would be the greatest single factor, with exceptions made for the child of higher Intelligence Quotient and advanced maturity. Iowa law provides for only chronological age, the only exception being that after a child enters kindergarten he may be advanced to first grade any time before December 31 if he shows superior ability.¹ This would deprive him of the kindergarten experience, and in actual practice, is rarely done.

There were many problems involved in determining school entrance age. The parents' attitudes were one of the forceful determining factors.

Each autumn the nation's most indignant parents are those with children barely too young to enter school. The cutoff age may be as high as $6\frac{1}{2}$ (in Des Moines) or as low as 5 years 3 months (in Norwich, New York), but thousands of children are bound to miss out by a few days or weeks. In 77% of U. S. public schools, the rules are inflexible; the child simply has to wait another year.

¹Ibid.

Many educators would like to see the cutoff point raised from the current U. S. average of 5 years 9 months to about 5 years 11 months. They explain that the younger the child the less his chances of adjusting to first grade work; early failure at the blackboard can induce a defeatist attitude that endures for years. **Physically** as well as mentally, say the educators, waiting is wise. Studies have shown that four out of five children are still normally farsighted at the age of six, are handicapped in reading until about six months later. But these arguments do not carry far with an irate parent, who is apt to feel, as his strapping son of almost seven stumbles into a first-grade class, that he has fathered a "slow child."¹

To meet the requirements of both sound practice and parental desire more schools are allowing borderline cases to be tested by competent child psychologists. A survey by the National Education Association in 1958 disclosed that the testing and counseling system was already in use by about fifteen per cent of United States school systems. Ideally the testing standards should include physical build, health, and social and emotional maturity as well as mental ability. Schools are not equipped to handle such exhaustive tests, but many parents would be happy to pay for a private psychologist if necessary. Over the country many youngsters who miss the cutoff date are sent to private schools and then enter the public schools in second grade. In Houston, parents gladly pay a special head tax of \$90 to break the cutoff rule.²

¹"Too Young for School?" Time, LXXIV (September 7, 1959), 60.

²Ibid.

Another interesting study disclosed the strength of parental attitudes. In Park Forest, a rapidly growing suburb of Chicago, a real controversy arose over the kindergarten admissions policy. The situation was so explosive that the suburb's Reporter stated that "the fury of a woman scorned can't hold a candle to the heat generated by a parent whose child has been refused admission to kindergarten." For six years, the kindergarten admission policy had been conventional: any child who became five before September 1 automatically got in. Those reaching the age of five by December 31 could be tested, and only about ten per cent were usually failed. But with the coming of a new superintendent, a conscientious educator, a new plan was instigated. Superintendent Smith was convinced that kindergarten was harmful for children who are not ready. "Their attention span is much too short. They cry and wet their pants." With his seven-member school board's approval, an examination fee of \$7.00 was charged, new tests were used (he insisted that parents knew exactly how to cram their youngsters for the old ones), two special women psychologists were hired to watch for signs of emotional, social, and physical readiness by observing the children playing games, walking like a duck, and hopping like a bunny. Of the 203 tested, 135 children failed! Parents were furious. One lawyer whose son was among those rejected, insisted that the whole thing was

illegal, took the case to court and won. The office of the State Superintendent of Instruction declared the tests were not in conformity with the school code and that " . . . entrance to kindergarten must not be based on the maturity of the child, but on the particular age requirement." The new superintendent gave up his testing program and prepared to triple-shift.¹

The effects on the child who barely misses the entrance age is noted in an editorial in the Saturday Evening Post, timely dated September 5, 1953. This editorial acknowledges that starting youngsters off to school for the first time marks a real turning point in the lives of the children and their parents. It is a disappointing time however for those youngsters not quite old enough, and parents wangle every way they can to get them into the classroom. The editorial states that it is the child who starts late who is really ahead, and quotes H. M. Davis, supervising principal at River Edge, New Jersey, that a child who just misses the entrance age as being "just lucky enough to miss an unhappy school experience and gain a happy one." The editorial further stated,

An added year of age will give any high school boy quite a few pounds more weight on the football field, and any high school girl a lot more poise and judgment on the

¹"Hopping Like a Bunny," Time, LXVI (September 5, 1955), 45.

front porch.¹

An outstanding study concerned with the early admission of the bright child to school was carried out in the Warren Demonstration Project.

The results to date of the field demonstration project known as the Warren Project supply additional evidence that able children, properly selected, can successfully enter school at an age earlier than the usual admission age. The project receives the support of the cooperative research program of the U. S. Office of Education, the University of Pittsburgh, the Pennsylvania State Department of Public Instruction, and the Warren (Pa.) school system.

Despite many favorable research reports on the consequences of early admission to school of carefully selected able children, the practice of early admission is not widespread. Admission age may vary from state to state, but not from child to child within a school district. Yet educators generally agree that the readiness of children for school varies and that these differences can be discerned even in preschool-age children.²

The Warren Project found that many educators were opposed to early entrance because they were uninformed, some because of the danger of "pushing." But if properly handled, adequate selection procedures would insure that the "whole" child is ready for school. But many able young children would find kindergarten stimulating, and some who

¹"When School Days Begin Too Soon, the Zest for Learning May Weaken," Saturday Evening Post, CCXXVI (September 5, 1953), 12.

²J. W. Birch, W. D. Barney, and W. J. Tisdall, "Early Admission of Able Children to School; The Warren Demonstration Project," School Life, XLVI (June, 1964), 7-9.

are not admitted may be missing some of the joys of successful accomplishment.

Little had been known about the few schools who have successfully adopted the practice, notably the Brookline, Massachusetts, school system, which started such a program in 1932.

Warren, a city of 15,000 in northwestern Pennsylvania, was chosen as the study site because it combined many desirable features. Warren had a broad cross section of socio-economic levels, diversified industries, was a well established community and a county seat. Kindergartens had long been a part of the school program. The city had forward-looking educational and community leaders.

The project was begun in the fall of 1961, but was preceded by many months of preparation. This was to be more of a demonstration than an experimental project. The demonstration was carried out within the policies of the Warren school system. The children were examined by district psychologists. The district selected the testing program on the principle that when the research program terminates, the school district should be able to incorporate the project into its normal activities.

Using the pre-school census results, all children in the age group eligible for kindergarten in September of 1963 were invited to be examined by school psychologists during

1961-1962. Of 257 children, all but twenty-eight came.

The tests given were the Stanford-Binet Scale and the Goodenough Draw-A-Man Test. The child was also rated on his behavior and his social and emotional maturity, (one of the measures used was the Vineland Social Maturity Scale), and his health was checked. All results were discussed with the parents.

The psychologist listed thirty-seven children as possible candidates for early admission in 1962 because of their mental, social, emotional and physical maturity. Their Intelligence Quotients were generally 130 or higher (based on Pinneau Revised Tables.) Their social maturity was one year or more above the standard. All children were rated as having sound and well developed personalities. All children met health standards, including those for height and weight.

Parents had the ultimate decision to make--nineteen entered kindergarten in September 1962 and were treated as regular pupils. They were tested only when the others were tested. On reading readiness tests given near the end of the kindergarten year, regular pupils ranged in percentiles from zero to ninety-nine; those admitted early, from twenty-nine to ninety-nine. Intelligence Quotient scores held steady, the mean difference being less than one-half of one Intelligence Quotient point from the original testing. All

nineteen children were promoted and made satisfactory progress but one who had home problems. Sociometric ratings indicated they are well liked by their peers. Elementary teachers were initially less favorable toward the program than the junior and senior high teachers, but were substantially in favor of the program before the years' end.

The Warren Project's second group in kindergarten of 1962-1963 was equally successful. Data collected suggested the need for increased time spent in interpreting the program both to the general public and to the teachers. The Warren school board has continued the practice of early admission, and other school districts have been increasingly aware of the project and its success, and have considered early admission programs of their own.¹

Schools should be flexible enough to adapt to the acknowledged differences in the developmental rates in children. The Warren Project demonstrates that early admission to school for able children is one of the essential elements in a sound policy of admission to and progression through school. Arbitrary admission ages are as much a barrier to flexibility as arbitrary age-grade promotion practices and static curriculums.²

Another study approached early admission to school with purposes much different than those of the Warren Project. This plan urged early admission to school of all children.

¹Ibid.

²Ibid.

A bold, revolutionary proposal aimed at providing early schooling for some 5,000,000 of the nation's four and five-year-olds by reducing the starting school age by two years --- from six to four --- was urged recently in a report by the Educational Policies Commission (EPC). It described the traditional practice of starting children's schooling at age six as "obsolete," since most children at that age "have already developed a considerable part of the intellectual ability they will possess as adults."¹

The commission is jointly sponsored by the National Education Association and the American Association of School Administrators. The commission pointed out that the two year waiting period "generally limits the flowering of their potential."² It recommended that the Federal Government provide funds for early schooling to be an integral part of the public education system. It called attention to the fact that "the disadvantaged children are in the greatest need of early schooling because of their deficient cultural background,"³ and included in this group not only racial groups but also those whose parents are obsessed with the need to impress and achieve and show them little love, those who have little opportunity to play with children of other backgrounds, and those with physical handicaps. The commission felt that early education could especially help these children, but recommend it for all children.

¹"School at Age Four," School and Society, XCIV (October 29, 1966), 345.

²Ibid.

³Ibid.

The commission stated that early education has long been available to the well-to-do, and that the government is now providing some help in this area for the poor, but that the middle group should have the same opportunities. The plan would tend to reduce remedial programs and the school dropout rate.

The program envisioned would be one especially planned for the four and five-year-old child, not a "watered-down" version of first grade. The commission also stressed that the early schooling plan must strengthen home life, not replace it, and urged mothers to become involved in their child's school experience.¹

¹Ibid.

CHAPTER III

REPORT OF DATA

Within this chapter, the results of investigation of school records of subject children will be reported. For the sixth, fifth, fourth and third grades of the Prairie City Elementary School, the investigator compared oldest, middle and youngest groups as to grade placement, class median and class mean scores on the Iowa Test of Basic Skills.

I. AGE AND ACHIEVEMENT CHART OF SIXTH GRADE

This group of children entered kindergarten in September of 1960 when Iowa's minimum age law of 1952 was still in effect, allowing a child to enter school if five years of age by November fifteenth of the entering year.

As shown in Figure 1, for the sixth grade, the nine youngest had five students scoring above the 6.5 grade placement score pertinent to a group tested in January of a school year. Four students scored below 6.5. Three scored above and six below the 7.1 class median and the 7.02 class mean scores.

For the twenty students in the middle grouping, fourteen scored above and six below the 6.5 grade placement. Eleven were above and nine below the class median score.

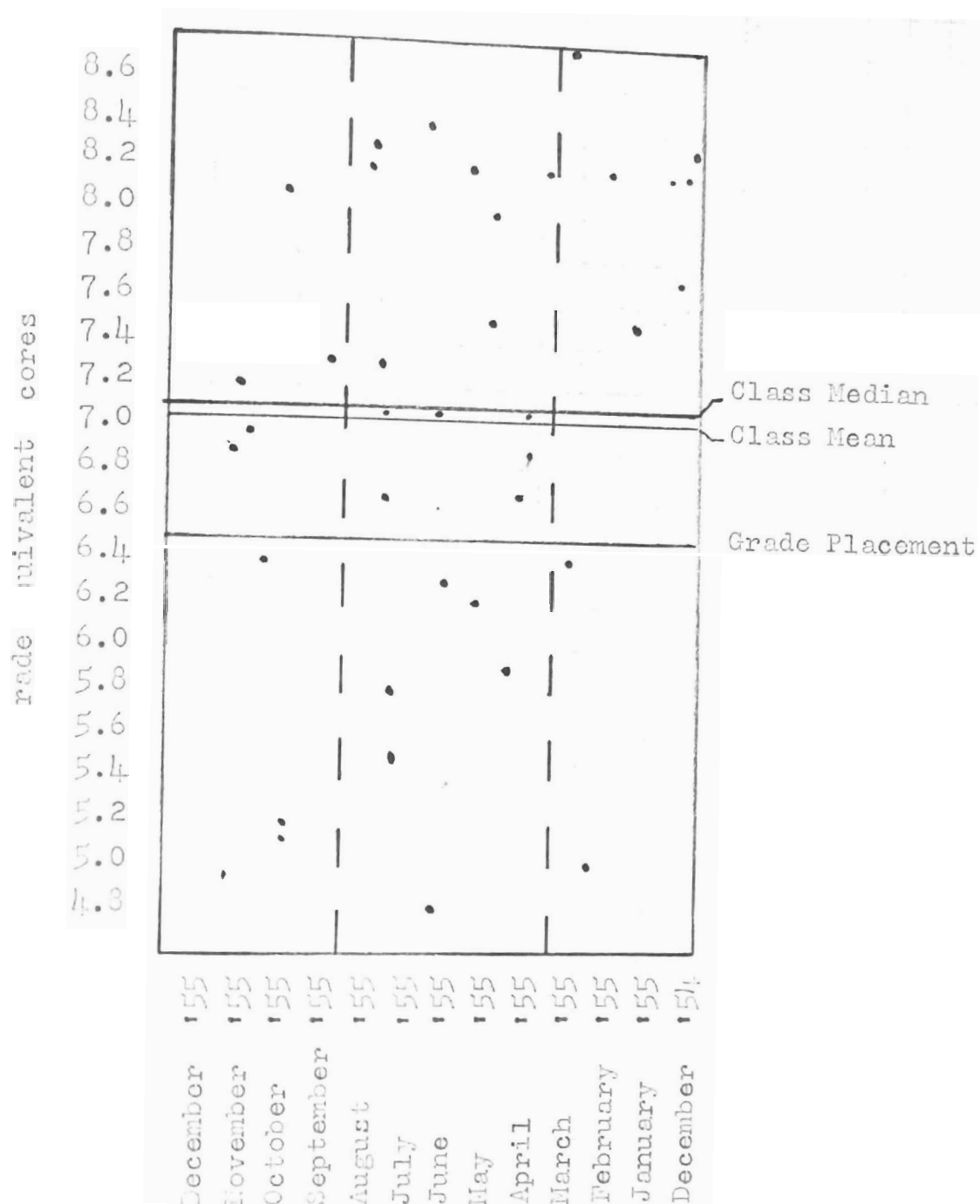


Figure 1. Age and Achievement Chart of Sixth Grade.

Ten scored above and ten below the 7.02 class mean.

For the nine oldest students, seven scored above the 6.5 grade placement and two below. Seven were above and two below both the class median and mean scores.

Of the nine oldest students, five had birthdays in December and January before their September starting dates in kindergarten. The scores of these students relative to grade placement, median and mean scores were five above and none below.

As to uniformity of achievement, the sixth grade had twenty-one of thirty-eight students who scored within a grade placement range of one year.

II. AGE AND ACHIEVEMENT CHART OF FIFTH GRADE

This group of children entered kindergarten in September of 1961 when Iowa's minimum age law of 1952 was still in effect, allowing a child to enter school if five years of age by November fifteenth of that year.

As shown in Figure 2, for the fifth grade, the nine youngest had six students scoring above the 5.5 grade placement score pertinent to a group tested in January of a school year. Three students scored below 5.5. Two scored above and seven below the 6.1 class median and the 6.18 class mean score.

For the twenty students in the middle grouping,

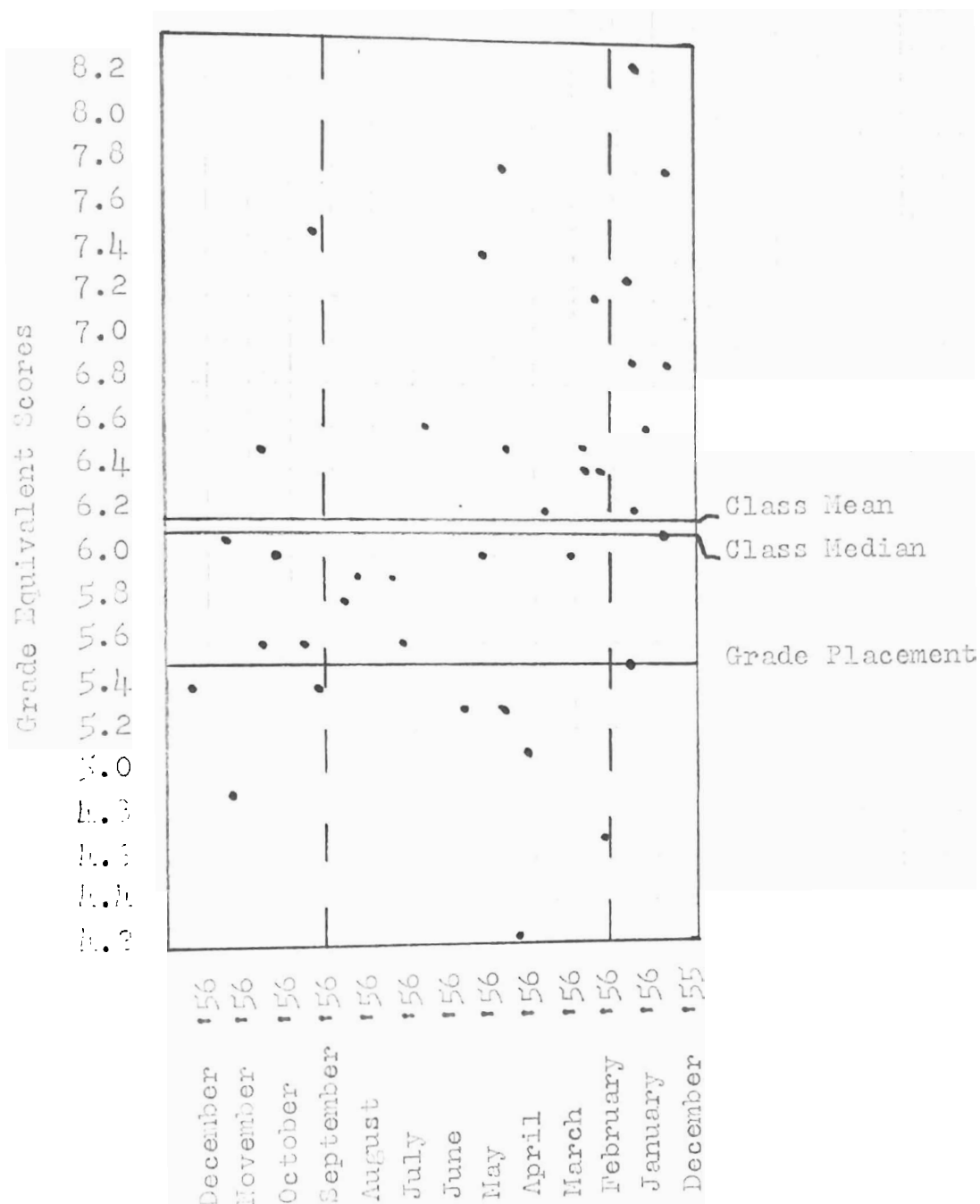


Figure 2. Age and Achievement Chart of Fifth Grade.

fifteen scored above and five below the 5.5 grade placement. Ten were above and ten below the class median score. Nine scored above and eleven below the 6.18 class mean score.

For the nine oldest students, nine scored on or above the 5.5 grade placement and none below. Eight scored at or above the class median score and one below. Seven scored above and two below the class mean score. The birthdays of the nine fell in December and January before their September starting dates in kindergarten.

As to uniformity of achievement, this group had twenty-six of thirty-eight within a grade placement range of one year.

III. AGE AND ACHIEVEMENT CHART OF FOURTH GRADE

This group of children entered kindergarten in September of 1962, when the minimum entrance age was five years by October fifteenth of that year.

As shown in Figure 3, for the fourth grade, the eleven youngest had nine students scoring above the 4.5 grade placement score pertinent to a group tested in January of a school year. Two students scored below 4.5. Five scored above and six scored below the 5.45 class median score. Four scored above and seven scored below the 5.58 class mean.

For the twenty students in the middle group, nineteen scored on or above and one below the 4.5 grade placement;

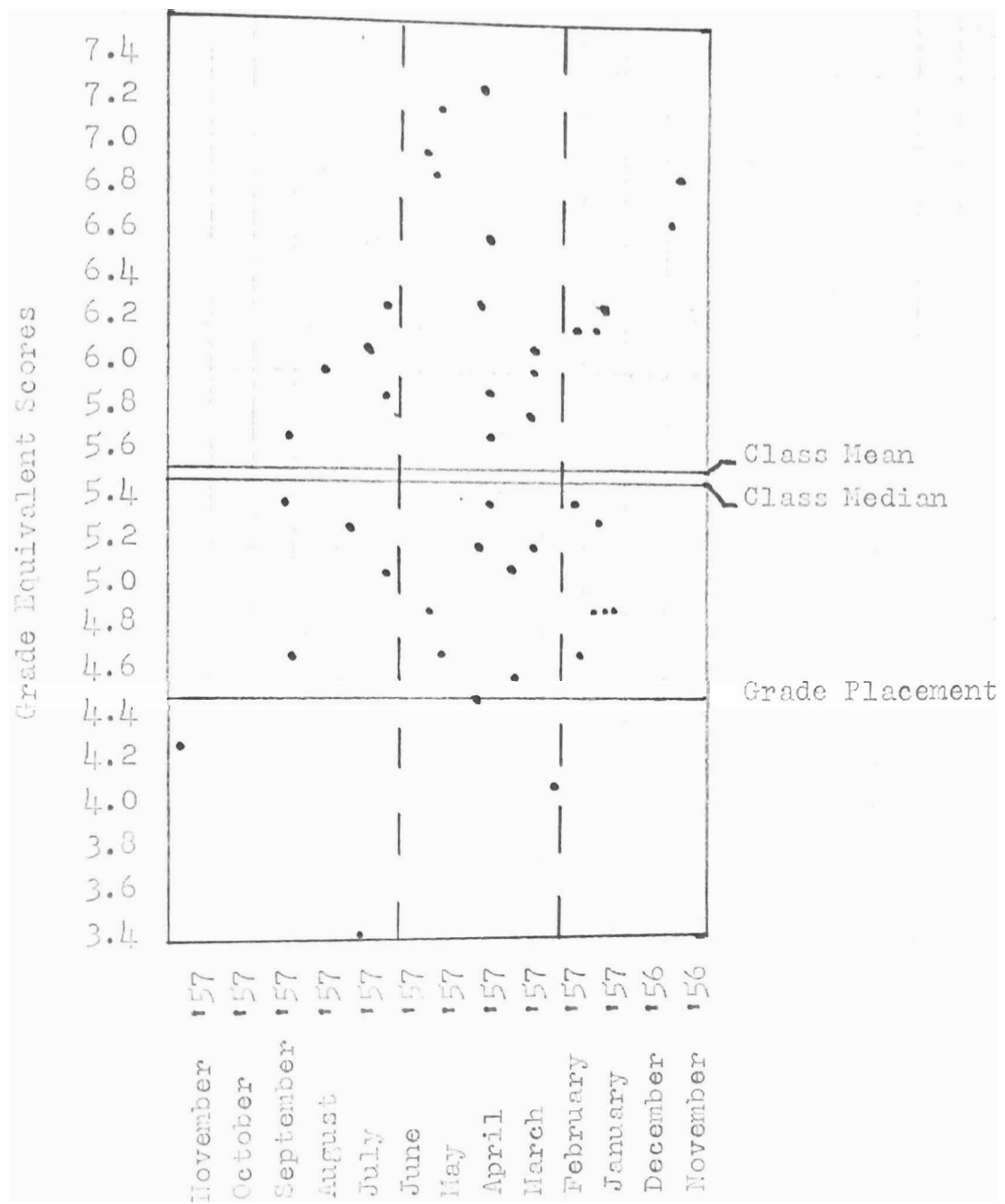


Figure 3. Age and Achievement Chart of Fourth Grade.

eleven were above and nine below both the class median and the class mean scores.

For the eleven oldest students, eleven scored above the 4.5 grade placement and none below; five were above and six were below both the class median and mean scores.

Of the eleven oldest, two had birthdays in November and December before their September starting dates in kindergarten. Both scored above grade placement, class median and mean.

As to uniformity of achievement, this group had eighteen of forty-two within a grade placement range of one year.

IV. AGE AND ACHIEVEMENT CHART OF THIRD GRADE

This group of children entered kindergarten in September of 1963, under Iowa's present minimum age law requiring an entrance age of five years by September fifteenth of the entering year.

As shown in Figure 4, for the third grade, the ten youngest had three students scoring above the 3.5 grade placement score pertinent to a group tested in January of a school year. Seven students scored below 3.5. Three scored above and seven scored below both the 3.6 class median and the 3.61 class mean scores.

For the nineteen students in the middle group, twelve

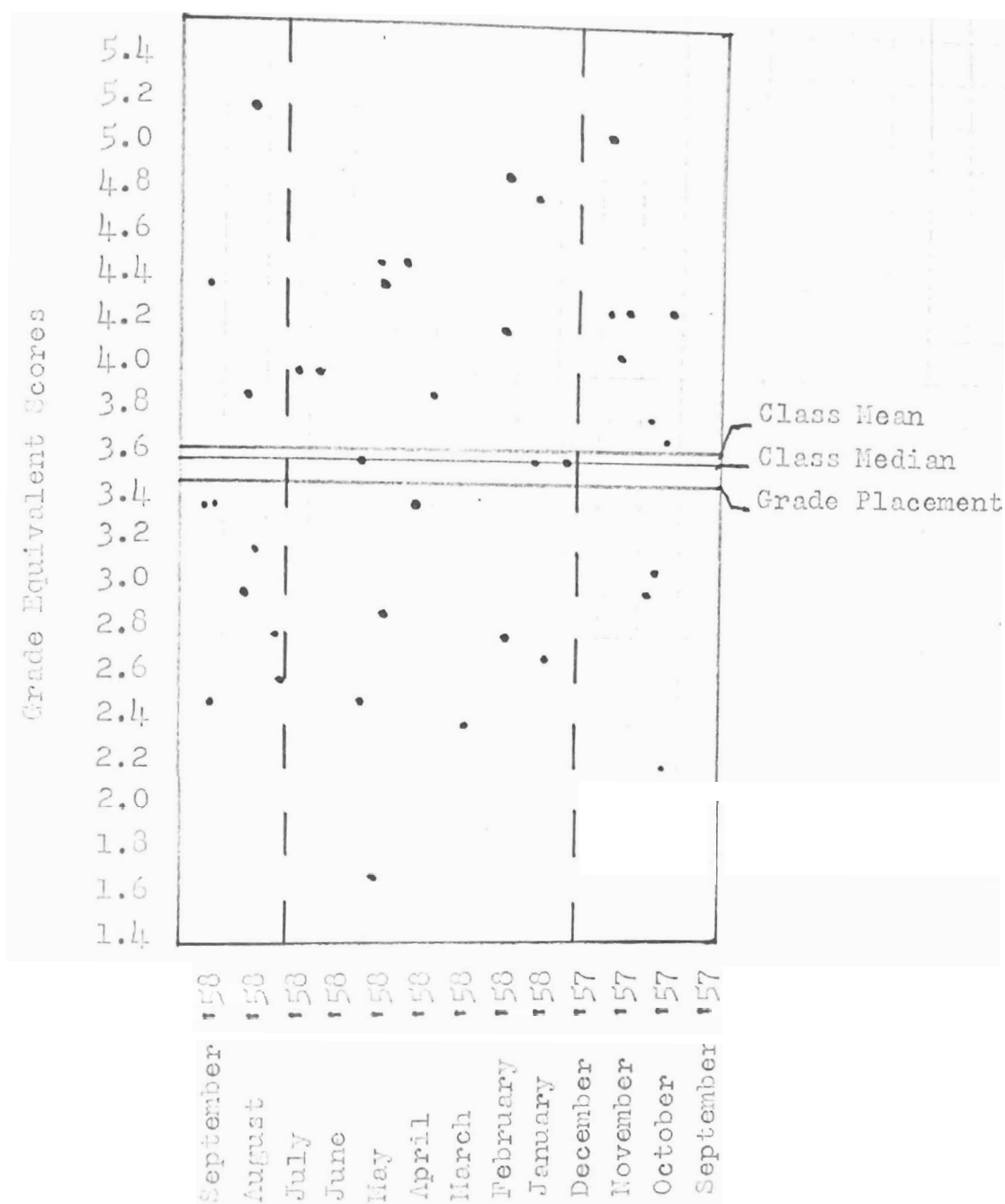


Figure 4. Age and Achievement Chart of Third Grade.

scored above and seven scored below the 3.5 grade placement. Nine were above and ten were below both the class median and the class mean scores.

For the ten oldest students, seven scored above the 3.5 grade placement and three below. Seven were above and three were below both the class median and mean scores. The birthdays of the ten fell in October and November before their September starting dates in kindergarten.

As to uniformity of achievement, this group had thirty-two of thirty-nine within a grade placement range of one year.

CHAPTER IV

SUMMARY AND CONCLUSIONS

It was the purpose of this study to show the relationship of school entrance age and academic achievement in the Prairie City Elementary School. The Code of Iowa stated that on and after July 1, 1952, a child must have attained the age of five years on or before the fifteenth of November of the current school year; on and after July 1, 1962, a child must have attained the age of five years on or before the fifteenth of October of a current school year; on and after July 1, 1963, a child must have attained the age of five years on or before the fifteenth of September of the current school year.

The investigator conducted this research with the following problems in mind: Does the most recent ruling which requires that the child be five years of age on or before the fifteenth of September make for more uniformity of academic achievement within a grade level than the previous ruling of the critical date of November fifteenth? Does the child at the upper level of the chronological age scale achieve academically at a higher level than the child at the lower level of the chronological age scale? Does the additional two months' maturity attained as a result of the ruling contribute enough in an overall grouping situation to

justify the ruling? Should there be provision for testing for purposes of early entry to kindergarten in the case of the exceptionally bright child? Would parents of a child whose birthday is in late August or early September be wise to keep the child out of school for an additional year?

The groups of children selected for this study were the fifth and sixth grade students who entered kindergarten in September of 1960 and 1961, when Iowa's minimum school entrance age was five years by November fifteenth; the fourth grade, who entered kindergarten in September of 1962 when the entrance age was five years by October fifteenth; and the third grade, who entered kindergarten in September of 1963 when the entrance age was five years by September fifteenth.

The composite grade equivalent scores of the Iowa Test of Basic Skills were selected as the measure of academic achievement. Birth dates were taken from the school records. Date of birth and grade equivalent score for each student were plotted on a scattergram for each grade level. Both sections of each grade were plotted in one unit. To permit a comparison of achievement on the basis of age, the children were divided into groups of oldest twenty-five per cent, middle fifty per cent, and youngest twenty-five per cent. Comparisons were made according to pertinent grade placement, class median and class mean.

I. SUMMARY

The total number of students in all grades investigated was 157. Forty scored below grade placement. Sixteen of these were in the youngest group, five in the oldest group. Seventy-six scored below class median. Twenty-six of these were in the youngest group, twelve in the oldest group. Seventy-nine scored below class mean. Twenty-seven of these were in the youngest group, thirteen in the oldest group.

The total number of students in the group designated as "youngest" was thirty-nine. Sixteen of these had birthdays after September fifteenth, which made their school entrance age less than five years. Seven of these students scored below grade placement, nine above. Eleven students scored below class median, five above. Twelve students scored below the class mean, four above. Since the third grade group entered under the law making attainment of five years of age by September fifteenth mandatory for entrance, the forty-nine students were in grades six, five and four only.

In the group designated as "oldest" in each of the fourth, fifth and sixth grades, there was no student whose birthday fell between September fifteenth and November fifteenth, and who had been started in kindergarten a year later than the first possible year.

For the fifth and sixth grades, the very oldest students were those whose birthdays fell in December and January before their September starting dates in kindergarten. The scores of these students relative to grade placement, median and class mean are as follows: fourteen scored above grade placement, none below; thirteen scored above class median, one below; twelve scored above class mean, two below.

For the fourth grade, the very oldest students were those whose birthdays fell in November and December before their September starting dates in kindergarten. There were two students in this category; both scored above grade placement, class median and class mean.

For the third grade, the very oldest students were those whose birthdays fell in October and November before their September starting dates in kindergarten. Of these ten students seven scored above and three below grade placement, class median and class mean.

Total scores for the group in all four grades whose birthdays were in the earliest two months were as follows: twenty-three scored above grade placement, three below; twenty-two scored above the class median, four below; twenty-one scored above class mean, five below.

II. CONCLUSIONS

The third, the only grade with a September fifteenth

starting date, did show the strongest central tendency of scores. However, twenty-one of the fourth grade, eleven of the fifth and twelve of the sixth were above grade placement scores. The investigator concludes that the data are insufficient to determine that the changing of the age for starting kindergarten did produce uniformity of attainment.

In every grade, the group designated as "youngest" had fewer scores at or above the grade placement norm, the class median or the class mean than did the group designated as "oldest." Hence the upper level group chronologically did achieve academically at a higher level than the lower level group chronologically.

It would seem that there are insufficient data to determine the extent of the additional two months' maturity attained as a result of the minimum age law requiring that a youngster be five years of age by September fifteenth rather than the previous dates of November fifteenth and October fifteenth. Only one group, the third grade, had no youngster less than five years of age at school entrance. In this group there was evidence that the youngest group achieved at a lower level than the oldest group. In fourth, fifth and sixth grades, there was no student whose birthday fell between November fifteenth and September fifteenth and who had entered kindergarten a year later than his first eligibility. The very oldest students in those grades whose

birthdays fell within the earliest two months had all fourteen above grade placement, thirteen above class median and twelve above class mean. The very youngest students in those grades, the sixteen who started school at an age less than five years, had nine above grade placement, but only five above class median and four above class mean.

There were three students with October birthdays, two in sixth and one in fifth grade, who scored above their class means. This indicated that a testing program for early entrance to kindergarten might determine the exceptionally bright child who could achieve at class level.

In this study there were no children of minimum entrance age who were started in kindergarten a year later than the first possible year. Even without this, one cannot completely determine the advisability of keeping a child out of school for an additional year on the basis of this one study. However, the youngest students were more likely to be at the lower end of the grade placement, class median and class mean scales, and those at the upper level of the chronological scale did achieve academically at a higher level.

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